

EXECUTIVE SUMMARY

This status report of the water and wastewater infrastructure program for the US-Mexico border area emphasizes water quality and public health conditions. The report also analyzes the current (2000) and future (2020) water and wastewater infrastructure needs for the increasing population along the border and highlights the accomplishments achieved by the binational water groups which the U.S. Environmental Protection Agency (EPA), through its Office of Water, and Mexico's Secretariat of the Environment, Natural Resources and Fisheries (SEMARNAP), through its National Water Commission (CNA), Border Environment Cooperation Commission (BECC), North American Development Bank (NADBank) and International Boundary Water Commission (IBWC). This group along with state and municipal governments cooperate in the management of the water resources along the border area.

Environmental problems have been compounded by rapid population growth in the sister cities, all of which are the main gateway for trade and travel between Mexico and the U.S. The strategic positions of these cities attract industry and investment; however, it also carries problems including pollution and its impact on the health conditions of the people living in the border area. The growth in population has overwhelmed the infrastructure capacity, overloading the existing treatment facilities and causing partly treated or untreated direct wastewater discharges to the surface water bodies along the border. The population along the U.S.-Mexico Border is expected to further increase from 12.6 million in the year 2000 to about 21 million in 2020.

Surface water quality monitoring data contained in this report were gathered, compiled, and analyzed for all the boundary area water bodies. The results are compared to the U.S. and Mexico water quality standards, for fecal coliform and dissolved oxygen concentrations. The sampling data results indicate that in the majority of the sampling locations the water quality standards for fecal coliform and dissolved oxygen are not met, typically because of partially treated or untreated wastewater discharges in all seven border watershed basins.

Public health problems along the border are exacerbated by the impact of cross-border travel and commerce. Primarily, the waterborne diseases are created by unsanitary conditions or lack of treatment facilities. The report analyzes the following waterborne diseases: Amebiasis, Hepatitis A, Shigellosis and Typhoid Fever. Along the border in both the U.S. and Mexico the incidence rates for these diseases are higher than the U.S. national average.

The North American Free Trade Agreement (NAFTA) increased binational emphasis on the border area by creating new institutions to manage improvements to the water and wastewater infrastructure. They are the Border Environment Cooperation Commission (BECC) and the North American Development Bank (NADBank). EPA provides funding assistance for water and wastewater infrastructure projects that have been developed and certified by the BECC. NADBank administers the Border Environmental Infrastructure Fund (BEIF) for EPA and serves as the border financier, arranging affordable financing packages to make infrastructure projects viable. The BEIF Program was established with EPA contributions currently totaling \$339 million in early 2001.

EPA has also funded the George E. Brown U.S.-Mexico Foundation for Sciences (FUMEC) and the Border Tribal Assistance Program which has funded 22 tribal projects in California and 3 in Arizona.

EPA, working with its various partners, has partly financed a number of water and wastewater treatment projects along the U.S.-Mexico border. In the Pacific Coastal Basin, major wastewater projects have been the International Wastewater Treatment Plant in San Diego and the San Antonio de los Buenos Plant in Tijuana, Mexico. The New River Basin has on-going projects in Brawley, Heber, Mexicali, and Westmorland. In the Colorado River Basin, the Naco project is almost completed and Nogales and Patagonia projects are just getting started. In the Rio Grande Basin, these are projects in El Paso and Ciudad Juárez. Both are completed and in operation additionally, eleven other projects in the basin are in various stages of completion. In the Gulf of Mexico Coastal Basin there are projects in Brownsville and Matamoros which have received direct funding assistance.

The estimated water and wastewater needs for the border populace through the year 2020 totals \$4.5 billion. The projected EPA participation in near-term needs is estimated at \$691 million, divided as follows: \$342 million in the U.S. and \$349 million in Mexico. Long-term needs are estimated at \$3.8 billion of which \$1.3 billion is needed for the U.S. and \$2.5 billion for Mexico.